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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,479	12/21/2001	G. Finn Wredenhagen	1020457-0021	4556

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EXAMINER	
YENKE, BRIAN P	

ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/024,479	WREDENHAGEN ET AL.	
	Examiner	Art Unit	
	BRIAN P. YENKE	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *29 May 2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims includes an equation however the variable j has not been defined, therefore the claims have not been considered in the rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2a. Claims 1, 4, 6, 8, 12-13, 18-19, 21,23 and 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Rao et al, US 5,828,786.

In considering claims 1, 4, 6, 8, 12-13, 18-19, 21, 23, 27-28,

*a) the claimed a signal generator...*is met by input processor 102 (Fig 3) which generates signals from the received camera 101.

*b) the claimed a plurality of pattern detection state machines...*is met by video stream analyzer 300 (Fig 3) which includes controller 402 (Fig 4a) which includes a plurality of state machines (Fig 5a/b) which detects the input signal (Appendix) and varies the

output according to the display mode, where a variety of conversions between inputs/outputs can be provided (Appendix). The claimed preset threshold is met by the type of input and the desired output.

*c) the claimed an arbiter state machine coupled...*is met by video stream analyzer 300 which includes a statistical analyzer 401, reordering memory 403 both coupled to controller 402 (Fig 4A).

Regarding the detection of motion, Rao discloses that video stream analyzer detects the amount of motion in the received signal in order to determine whether field or frame filtering should be performed (col 13, line 4-21).

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2b. Claims 33-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuwano et al., US 6,366,699.

In considering claims 33-38,

Kuwano discloses a system which detects telop characters in a series of frames of video data by using a telop detection unit 2 (Fig 1, Fig 2). The telop detection unit Judges whether each input frame includes a telop character display frame according to edge pairs detected from each input frame, using the intensity gradient directional information. Thus Kuwano meets the claimed language of examining a plurality of

rows...by detected the video information in a frame, and meets the determining the number of high low transitions by detecting the intensity of adjacent edge pixels.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3a. Claims 2-3, 5 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al., US 5,828,786.

Considering claim 2,

Rao discloses the elimination duplicate fields in order to improve video signal for compression.

However, a deinterlacing algorithm which ignores redundant fields and deinterlaces by meshing is conventional in the art, as disclosed by applicant's admitted prior art AAPA (page 8, para 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention Rao which discloses the removal of redundant fields in order to improve compression, with AAPA by using a conventional technique which ignores the redundant fields in order to deinterlace the signal by meshing, which can be provide the user a suitable uncompressed deinterlaced signal.

Considering claim 3,

As disclosed above, based upon video stream analyzer 300 and what type of signals are detected and the desired output determines the deinterlacing algorithm.

Considering claims 5 and 20,

Rao does not explicitly recite the detection of a 2:2 pulldown pattern. However, Rao does disclose the use of 3:2 pulldown with the conventional NTSC signal.

The use of a 2:2 pulldown is performed when using the PAL signal, as disclosed by AAPA.

Thus, based upon the type of signal received (i.e. geographic location US is NTSC, overseas PAL), would determine whether to perform a 3:2 or 2:2 pulldown.

3b. Claims 9-11, 14-17, 24-26 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al., US 5,828,786.

In considering claims 9-11 and 24-26,

Rao discloses the performance of motion compensation and also discloses that conventional motion compensation prediction is performed in the encoding process.

However, Rao does not explicitly recite how the motion is computed and the compensation performed based on the computed motion.

Conventional motion compensation is performed in an image in order to ascertain the differences (if any) between frames/fields of an image and whether there

is motion in an image or artifacts which appears as differences between the detected frames/fields.

Thus the examiner takes "OFFICIAL NOTICE" regarding a system which performs motion compensation by calculating differences between pixels in a field, quantizing the differences and determining whether the differences exceed a threshold.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rao which discloses image conversion from a received input format into a desired output performed, where Rao performs motion compensation and also eliminates any redundant fields to aid in the compression process, by also performing conventional motion compensation in order to even further reduce the size of the signal by eliminating those blocks/pixels in a field/frame which stay the same (no motion).

In considering claims 14-17, and 29-32,

Rao discloses a system which aids the encoder in the compression process by removing redundant/repeated fields, detecting scene cuts and mixed field frames.

However, Rao does not explicitly recite the detection of subtitles.

It is also conventional in the art to detect logos/text/subtitles in an image, since the addition of such items typically occur after the video frame has been created. This additional information would then produce unwanted effects, if not detected or removed from the video signal, since the detection between field/frames are based upon the video not the added items.

Thus the examiner takes "OFFICIAL NOTICE" to a system which detects logos/text or subtitles in an image.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rao, which discloses a system which receives a variety of input signals and provides a variety output signals, and also detects within the received signal repeated fields, scene cuts and mixed field frames in order to provide an ideally compressed signal, by also detected the additional information included in a signal, since the additional information is typically not part of the original signal and thus would preferably be detected/removed.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure—see newly cited references on attached form PTO-892.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (703) 305-9871. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (703)305-4795.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-HELP.

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800-PTO-9199 or 703-308-HELP

(FAX) 703-305-7786

(TDD) 703-305-7785

An automated message system is available 7 days a week, 24 hours a day providing informational responses to frequently asked questions and the ability to order certain documents. Customer service representatives are available to answer questions, send materials or connect customers with other offices of the USPTO from 8:30 a.m. - 8:00p.m. EST/EDT, Monday-Friday excluding federal holidays.

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General information brochures can also be obtained in person from the Patent Search Room located in Crystal Plaza 3, Room 1A03, 2021 South Clark Place, Arlington, VA 22202.

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BRIAN P. YENKE
Patent Examiner
Art Unit 2614

B.P.Y
17 September 2004